6900 Paseo Padre Pkwy Fremont, CA,
94555-3641 United States

Termination Procedure for Triaxial Contacts D-602-1112, D-602-1113, MIL-C-38999, Size 8

1. Scope

1.1 This procedure outlines the method of terminating D-602-1112 and D-602-1113 triaxial contacts to twinaxial cable.

2. Applicable Documents

2.1 Specifications and Standards

The following documents form a part of this standard to the extent specified herein. In the event of a conflict between this document and component drawing, the latter shall govern.

2.1.1 Raychem Specification Control Drawings

D-602-1112 Triaxial Socket Contact MIL-C-38999
Size 8 Twinaxial Cable

D-602-1113 Triaxial Pin Contact MIL-C-38999
Size 8 Twinaxial Cable

2.1.2 Raychem Engineering Standards

ES 61199 Termination Procedure for
SolderTacts® D-602-0126/0127

2.2 Other Specifications

Federal Standard QQ-S-571

2.3 Raychem Instructions

AA-400 SuperHeater Instructions

AD-1319 Holding Fixture Instructions

HL1920E and HL2020E Heat Gun, Heating Tool Instructions

3. Tools and Equipment

3.1 AA-400 SuperHeater with No. 979663 mini –SolderSleeve® terminator reflector, or HL1920E / HL2020E Steinel Hot Air Gun with EH0600-000 HL-Soldersleeve Reflector. (1)

3.2 AD-1319 holding fixture with AT-1319-14 adapter.

3.3 AD-1319 holding fixture with AT-1319-22 adapter.

3.4 AD-1297 trimmer for twisted pair wire for 22 AWG.

3.5 AD-1298 trimmer for twisted pair wire for 24-26 AWG.

3.6 AD-1447 or AD-464 SolderTact® contact removal tool.

3.7 AD-1480 repair holding fixture.

3.8 CV-1980 and/or CV-1981 with PR-25A reflector. (2)

4. Description

4.1 The D-602 triaxial connectors covered by this standard are used with No. 748 SolderTactsO to interconnect triaxial and twinaxial cable, Table 4-1 gives the designed combinations of connectors, contacts, and cable types.

Table 4-1

SOCKET CONNECTOR SIDE		
Socket Connector No	SolderTact Contact No.	Cable Type
D-602-1112	D-602-0126	Twinaxial

PIN CONNECTOR SIDE		
Pin Connector No	SolderTact Contact No.	Cable Type
D-602-1113	D-602-0127	Twinaxial

Notes

1 Steinel HL1920E / HL2020E Replaces CV5300 and CV5700 MiniGun®. But they still can be used

2 CV-1980, CV-1981, and PR-25A are available in European countries only.

5. Procedures

5 1 Cable Accommodation

5.1.1 24 AWG EMP-Hardened and/or Double-Shielded Data Bus Cable

5.1.1.1 D-602-1112 and D-602-1113 contacts will accommodate EMP-hardened and double-shielded twinaxial cable with the following dimensions:

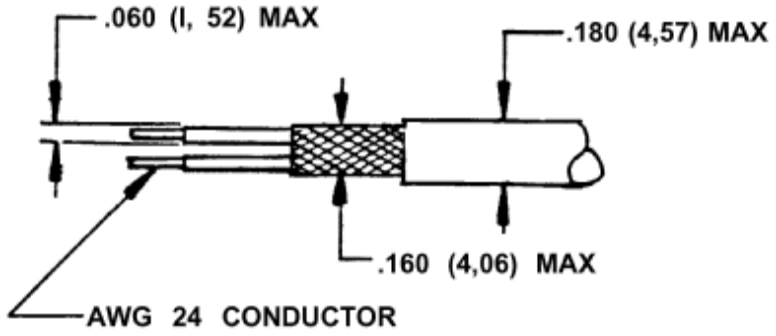

FIGURE 1

5.1.1.2 The following twinaxial cables meet these dimensions:

Raychem	10613
Raychem	10614
Raychem	EPD 6499

5.1.2 22 AWG Twinaxial Cable Accommodation

5.1.2.1 D-602-1112and D-621-1113 contacts will accommodate twinaxial cable with the following dimensions:

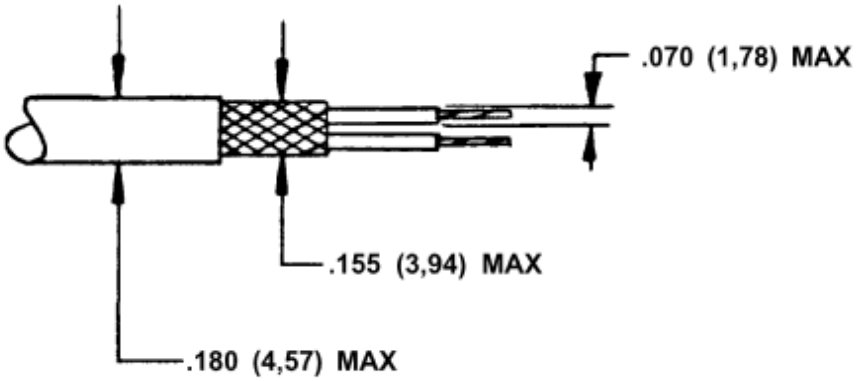

FIGURE 2

5.1.2.2 The following twinaxial cable meets these dimensions:

Raychem	10605

5.2 Cable Preparation

5.2.1 Twinaxial Cable Preparation and Termination Procedure for 24 AWG EMP-Hardened and/or Double-Shielded Data Bus Cable.

5.2.1.1 Strip outer cable jacket from cable for a distance of 0.150 ± 0.015 (3,81 ± 0,38) from end of cable.

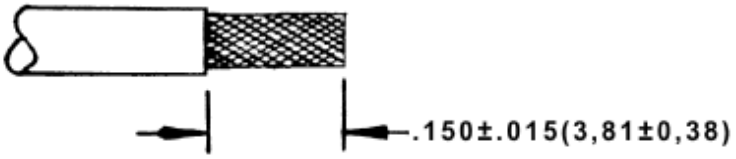

FIGURE 3

5.2.1.2 Trim exposed outer braid, Mu-metal tape or inner jacket, inner braid and filler material away from cable.

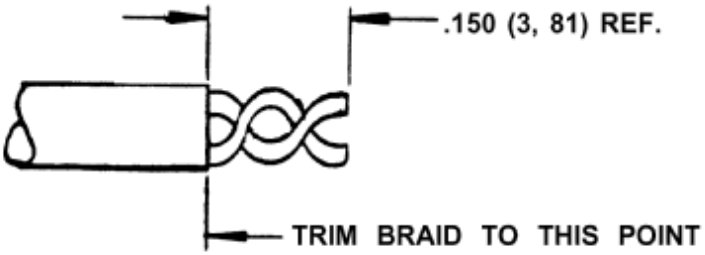

FIGURE 4

5.2.1.3 Strip outer cable jacket from cable for a distance of 0.750 ± 0.015 (19,05 ± 0,38) from end of cable.

FIGURE 5

5.2.1.4 Comb out outer braid and fold it back over outer cable jacket.

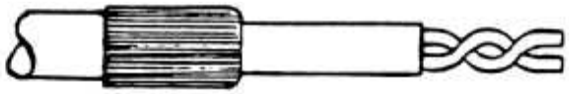

FIGURE 6

5.2.1.5 Remove Mu-metal tape or cable inner jacket, if any, to within .050 ± .015 (1,27 ± 0,38) of the folded back outer braid.

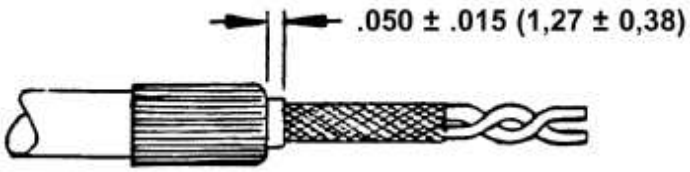

FIGURE 7

5.2.1.6 Comb out inner braid and fold it back over the outer braid.

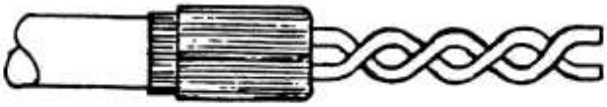

FIGURE 8

5.2.1.7 Straighten out exposed twisted pair wires cut away filler material, if any, flush to the inner braid as shown in Figure 9.

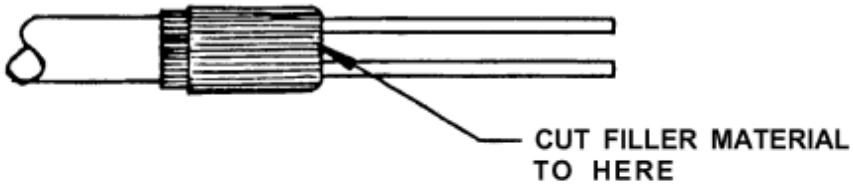

FIGURE 9

NOTE
For ease in straightening the exposed twisted pair wires, warm both wires slightly in the reflector of the CV-5300 MiniGun® and straighten while warm.

5.2.1.8 Proceed to Section 5.3.

5.2.2 Twinaxial Cable Preparation and Termination Procedure for 22 AWG Cable

5.2.2.1 Strip outer cable jacket and shield from cable for a distance of 0.150 ± 0.015 (3,81 ± 0,38) from end of cable.

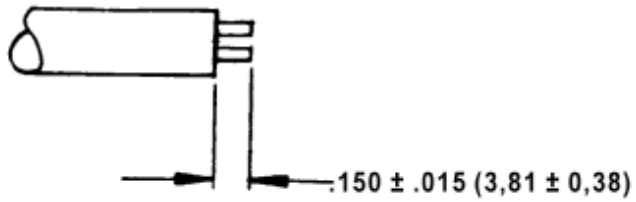

FIGURE 10

5.2.2.2 Remove outer cable jacket from cable for a distance of 0.700 ± 0.015 (17,78 ± 0,38) from end of cable.

FIGURE 11

5.2.2.3 Fold braid back over cable outer jacket.

FIGURE 12

5.2.2.4 Proceed to Section 5.3.

5.3 Termination Procedure

5.3.1 Termination to Inner Contact

NOTE
Strain Relief, Braid Terminator, and any other components that may be impractical to install once the inner contacts are in place should carefully be placed over the cable without damaging the prepared ends of the cable.

NOTE
If MIL-C-38999 contact has individual wire sealing member, it should be slipped onto cable prior to termination of inner contact.

Use the proper termination procedure paragraph of the ES listed in Table 5.3.1 for the different types of contacts.

TABLE 5.3.1

Type of Contact	**Cable Type (REF)**	**Termination Per**
D-602-0126/-0127	Twinaxial	ES 61199

5.3.2 Termination of Cable Braid to Triaxial Contact

5.3.2.1 Insert inner contact into rear of triaxial contact. Continue insertion until retention clip locks into insulator.

(Both D-602-1112 and D-602-1113 triaxial connectors will accommodate either D-602-0126 or D-602-0127 contact.)

FIGURE 13

5.3.2.2 Brush cable braid forward over rear barrel section of triaxial contact. Trim braid strands to yield spacing shown in Figure 14.

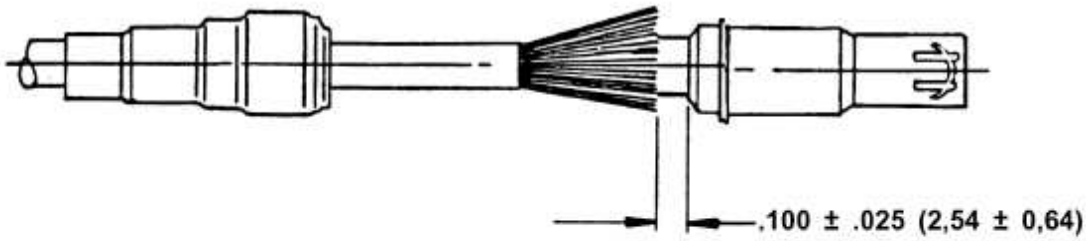

FIGURE 14

5.3.2.3 Slip braid terminator assembly over cable braid and triaxial contact barrel section, capturing cable braid between barrel section and braid terminator. Push braid terminator assembly until it bottoms on larger diameter portion of triaxial contact.

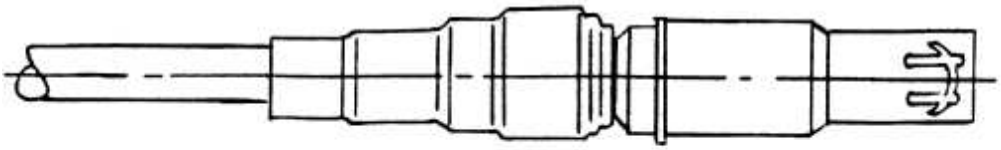

FIGURE 15

5.3.2.4 Position contact assembly into either AA-400 Super Heater or HL1920E/HL2020E HeatGun® fitted with proper reflector (paragraph 3).

5.3.2.5 Heat
Terminator assembly should begin on end of terminator butted against larger diameter of contact body. After solder flow occurs in this area, proceed slowly to other end of terminator which recovers down on cable jacket. Entire contact assembly should be slowly rotated in reflector during termination to assure even heating. It is recommended that contact body be supported during termination with a triaxial contact termination support tool or equivalent.

Figure 16
HL SOLDER SLV REFLECTOR

CAUTION
The contact and tools are hot after the termination. Allow the contact to cool before handling.